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<120> Means and Methods for Fibroblast-Like or Macrophage-Like Cell Transduction

<130> 2183-3982.2US

<140> 09/517,898

<141> 2000-03-03

<150> 60/122,732

<151> 1999-03-03

<160> 38

<170> PatentIn version 3.1

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atcg

64

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10

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32

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<210> 19

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<223> Chemically synthesized oligonucleotide for amplification of DNA encoding fiber protein derived from adenovirus serotype

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35

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<400> 23  
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<210> 27  
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<400> 27  
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<210> 28  
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<400> 28  
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ber protein derived from adenovirus serotype

<400> 31  
ccgatgcatt cagtcacctt ctwtatata 30

<210> 32  
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<212> DNA  
 <213> Artificial sequence

<220>  
 <223> DNA encoding Adenovirus Ad5/fib16 chimeric fiber

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 agcccagatg gagtttctaac tcttaaattg gttaattcac tcaactaccg cagcggaccc 180  
 ctccaactta aagttggaag cagtcttaca gtagatacta tcgatgggtc tttggaggaa 240  
 aatataactg ccgaagcgcc actcactaaa ctaaccactc catagggttta ttaataggat 300  
 ctggccttgca aacaaaggat gataaaactt gtttatcgct gggagatggg ttggtataca 360  
 aggatgataa actatgttta tcgctgggag atgggttaat aacaaaaaat gatgtactat 420  
 gtgccaaact aggacatggc cttgtgtttg actcttccaa tgctatcacc atagaaaaca 480  
 acaccttgct gacaggcgca aaaccaagcg ccaactgtgt aattaaagag ggagaagatt 540  
 cccagactg taagctcact ttagttctag tgaagaatgg aggactgata aatggataca 600  
 taacattaat gggagcctca gaatatacta acaccttggt taaaacaatc aagttacaat 660  
 cgatgtaaac ctgcatttg ataatactgg ccaaattatt acttacctat catcccttaa 720  
 aagtaacctg aactttaaag acaacccaaa catggctact ggaaccataa ccagtgccaa 780  
 aggcttcctg cccagcacca ccgcctatcc atttataaca tacgccactg agaccctaaa 840  
 tgaagattac atttatggag agtggtacta caaatctacc aatggaactc tctttccact 900  
 aaaagttact gtcacactaa acagacgtat gttagcttct ggaatggcct atgctatgat 960  
 ttttcatggc ctctaaatgc agaggaagcc ccggaacta ccgaagtcac tctcattacc 1020  
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<210> 33  
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 agcccagatg gagtttctaac tcttaaattg gttaattcac tcaactaccg cagcggaccc 180  
 ctccaactta aagttggaag cagtcttaca gtagatacta tcgatgggtc tttggaggaa 240  
 aatataactg ccgcagcgcc actcactaaa actaaccact ccatagggtt attaatagga 300



tctggcttgc aaacaaagga tgataaactt tgtttatcgc tgggagatgg gttggtaaca 360  
aaggatgata aactatgttt atcgctggga gatggggttaa taacaaaaaa tgatgtacta 420  
tgtgccaaac taggacatgg ccttgtgttt gactcttcca atgctatcac catagaaaac 480  
aacaccttgt ggacaggcgc aaaaccaagc gccaaactgtg taattaaaga gggagaagat 540  
tccccagact gtaagctcac tttagttcta gtgaagaatg gaggactgat aaatggatac 600  
ataacattaa tgggagcctc agaataact aacaccttgt ttaaaaaaca tcaagttaca 660  
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aaaagtaacc tgaactttta agacaaccaa aacatggcta ctggaaccat aaccagtgcc 780  
aaaggcttca tgcccagcac caccgcctat ccatttataa catacgccac tgagacccta 840  
aatgaagatt acatttatgg agagtgttac tacaaatcta ccaatggaac tctctttcca 900  
ctaaaagtta ctgtcacact aaacagacgt atggttagctt ctggaatggc ctatgctatg 960  
aatttttcat ggtctctaaa tgcagaggaa gccccgaaa ctaccgaagt cactctcatt 1020  
acctccccct tctttttttc ttatatcaga gaagatgact ga 1062

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<211> 353  
<212> PRT  
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1 5 10 15

Tyr Glu Asp Glu Ser Ser Ser Gln His Pro Phe Ile Asn Pro Gly Phe  
20 25 30

Ile Ser Ser Asn Gly Phe Ala Gln Ser Pro Asp Gly Val Leu Thr Leu  
35 40 45

Lys Cys Val Asn Pro Leu Thr Thr Ala Ser Gly Pro Leu Gln Leu Lys  
50 55 60

Val Gly Ser Ser Leu Thr Val Asp Thr Ile Asp Gly Ser Leu Glu Glu  
65 70 75 80

Asn Ile Thr Ala Ala Ala Pro Leu Thr Lys Thr Asn His Ser Ile Gly

85

90

95

Leu Leu Ile Gly Ser Gly Leu Gln Thr Lys Asp Asp Lys Leu Cys Leu  
 100 105 110

Ser Leu Glu Asp Gly Leu Val Thr Lys Asp Asp Lys Leu Cys Leu Ser  
 115 120 125

Leu Gly Asp Gly Leu Ile Thr Lys Asn Asp Val Leu Cys Ala Lys Leu  
 130 135 140

Gly His Gly Leu Val Phe Asp Ser Ser Asn Ala Ile Thr Ile Glu Asn  
 145 150 155 160

Asn Thr Leu Trp Thr Gly Ala Lys Pro Ser Ala Asn Cys Val Ile Lys  
 165 170 175

Glu Gly Glu Asp Ser Pro Asp Cys Lys Leu Thr Leu Val Leu Val Lys  
 180 185 190

Asn Gly Gly Leu Ile Asn Gly Tyr Ile Thr Leu Met Gly Ala Ser Glu  
 195 200 205

Tyr Thr Asn Thr Leu Phe Lys Asn Asn Gln Val Thr Ile Asp Val Asn  
 210 215 220

Leu Ala Phe Asp Asn Thr Gly Gln Ile Ile Thr Tyr Leu Ser Ser Leu  
 225 230 235 240

Lys Ser Asn Leu Asn Phe Lys Asp Asn Gln Asn Met Ala Thr Gly Thr  
 245 250 255

Ile Thr Ser Ala Lys Gly Phe Met Pro Ser Thr Thr Ala Tyr Pro Phe  
 260 265 270

Ile Thr Tyr Ala Thr Glu Thr Leu Asn Glu Asp Tyr Ile Tyr Gly Glu  
 275 280 285

Cys Tyr Tyr Lys Ser Thr Asn Gly Thr Leu Phe Pro Leu Lys Val Thr  
 290 295 300

Val Thr Leu Asn Arg Arg Met Leu Ala Ser Gly Met Ala Tyr Ala Met  
 305 310 315 320

Asn Phe Ser Trp Ser Leu Asn Ala Glu Glu Ala Pro Glu Thr Thr Glu  
325 330 335

Val Thr Leu Ile Thr Ser Pro Phe Phe Phe Ser Tyr Ile Arg Glu Asp  
340 345 350

Asp

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<211> 353  
<212> PRT  
<213> Adenovirus Ad16

<400> 35

Met Ala Lys Arg Ala Arg Leu Ser Ser Ser Phe Asn Pro Val Tyr Pro  
1 5 10 15

Tyr Glu Asp Glu Ser Ser Ser Gln His Pro Phe Ile Asn Pro Gly Phe  
20 25 30

Ile Ser Ser Asn Gly Phe Ala Gln Ser Pro Asp Gly Val Leu Thr Leu  
35 40 45

Lys Cys Val Asn Pro Leu Thr Thr Ala Ser Gly Pro Leu Gln Leu Lys  
50 55 60

Val Gly Ser Ser Leu Thr Val Asp Thr Ile Asp Gly Ser Leu Glu Glu  
65 70 75 80

Asn Ile Thr Ala Ala Ala Pro Leu Thr Lys Thr Asn His Ser Ile Gly  
85 90 95

Leu Leu Ile Gly Ser Gly Leu Gln Thr Lys Asp Asp Lys Leu Cys Leu  
100 105 110

Ser Leu Gly Asp Gly Leu Val Thr Lys Asp Asp Lys Leu Cys Leu Ser  
115 120 125

Leu Gly Asp Gly Leu Ile Thr Lys Asn Asp Val Leu Cys Ala Lys Leu  
130 135 140

Gly His Gly Leu Val Phe Asp Ser Ser Asn Ala Ile Thr Ile Glu Asn  
145 150 155 160

Asn Thr Leu Trp Thr Gly Ala Lys Pro Ser Ala Asn Cys Val Ile Lys  
165 170 175

Glu Gly Glu Asp Ser Pro Asp Cys Lys Leu Thr Leu Val Leu Val Lys  
180 185 190

Asn Gly Gly Leu Ile Asn Gly Tyr Ile Thr Leu Met Gly Ala Ser Glu  
195 200 205

Tyr Thr Asn Thr Leu Phe Lys Asn Asn Gln Val Thr Ile Asp Val Asn  
210 215 220

Leu Ala Phe Asp Asn Thr Gly Gln Ile Ile Thr Tyr Leu Ser Ser Leu  
225 230 235 240

Lys Ser Asn Leu Asn Phe Lys Asp Asn Gln Asn Met Ala Thr Gly Thr  
245 250 255

Ile Thr Ser Ala Lys Gly Phe Met Pro Ser Thr Thr Ala Tyr Pro Phe  
260 265 270

Ile Thr Tyr Ala Thr Glu Thr Leu Asn Glu Asp Tyr Ile Tyr Gly Glu  
275 280 285

Cys Tyr Tyr Lys Ser Thr Asn Gly Thr Leu Phe Pro Leu Lys Val Thr  
290 295 300

Val Thr Leu Asn Arg Arg Met Leu Ala Ser Gly Met Ala Tyr Ala Met  
305 310 315 320

Asn Phe Ser Trp Ser Leu Asn Ala Glu Glu Ala Pro Glu Thr Thr Glu  
325 330 335

Val Thr Leu Ile Thr Ser Pro Phe Phe Ser Tyr Ile Arg Glu Asp  
340 345 350

Asp

<210> 36

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<210> 37  
 <211> 19  
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 <223> Chemically synthesized Primer NY-DOWN

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<210> 38  
 <211> 1103  
 <212> DNA  
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<220>  
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 agcccagatg gagttctaac tottaaattg gttaatccac tcaactaccgc cagcggaccc 180  
 ctccaactta aagttggaag cagtcttaca gtagatacta tcgatgggtc tttggaggaa 240  
 aatataactg ccgaagcgcg actcactaaa ctaaccactc catagggtta ttaataggat 300  
 ctggcttgca aacaaaggat gataaacttt gtttatcgct gggagatggg ttggttaacaa 360  
 aggatgataa actatgttta tcgctgggag atgggttaat aacaaaaaat gatgtactat 420  
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 cccagactg taagctcact ttagttctag tgaagaatgg aggactgata aatggatata 600  
 taacattaat gggagcctca gaataacta acaccttggt taaaacaatc aagttacaat 660  
 cgatgtaaac ctgcatttg ataatactgg ccaaattatt acttacctat catcccttaa 720  
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 aggttcctatg ccgagacca ccgcctatcc atttataaca tacgccactg agaccctaaa 840  
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